

REMARKS/DISCUSSION OF ISSUES

By this Amendment, Applicants cancel claims 20-23 without disclaimer of the underlying subject matter or prejudice against subsequent prosecution. Applicants also amend claims 15-19, and add new claims 24-37. Accordingly, claims 15-19 and 24-37 remain pending in the application.

Applicants thank the Examiner for acknowledging the claim for priority and receipt of certified copies of the priority documents.

The Examiner is respectfully requested to state whether the drawings are acceptable.

Reexamination and reconsideration are respectfully requested in view of the following Remarks.

35 U.S.C. § 112

The Office Action rejects claims 15-19 under 35 U.S.C. § 112 for various reasons. Applicants note that claims 20-23 are now canceled, and therefore the reasons for their rejection are moot, as is the rejection of claim 23 under 35 U.S.C. § 101. Regarding pending claims 15-19, the stated reasons are: (1) the inclusion of reference numerals within the claims; and (2) an issue with the preamble of claim 15.

By this Amendment, Applicants amend claims 15-19 to delete all reference numerals. Applicants also amend claim 15 to address the issue raised with respect to the preamble.

Accordingly, Applicants respectfully request that the rejections of claims 15-19 under 35 U.S.C. § 112 be withdrawn.

35 U.S.C. § 102

The Office Action rejects claims 15-19 under 35 U.S.C. § 102 over Simmonds et al. U.S. Patent 6,437,563 ("Simmonds").

Applicants respectfully submit that claims 15-19 are all patentable over Simmonds for at least the following reasons.

Claim 15

Among other things, the method of claim 15 includes using a magnetic field generator disposed on a substrate to generate an AC magnetic field, and sensing with a magnetic sensor element also disposed on the substrate a magnetic property of at least one magnetic particle which magnetic property is related to the AC magnetic field. As explained in the present specification, this combination of features requires relatively little power, mechanically aligns the magnetic field generator and the magnetic sensor element, provides a very compact system, and facilitates the provision of all of the necessary interconnections for the various signals (see, e.g., page 3, lines 20-34).

Applicants respectfully submit that Simmonds does not disclose any method that includes this combination of features.

Accordingly, for at least these reasons, Applicants respectfully submit that claim 15 is patentable over Simmonds.

Claims 16-19

Claims 16-19 depend from claim 15 and are deemed patentable for at least the reasons set forth above with respect to claim 15.

NEW CLAIMS 24-37

New claims 24-27 all depend from claim 15 and are deemed patentable over Simmonds for at least the reasons set forth above with respect to claim 15, and for the various novel features recited therein

Among other things, new claims 28-37 all include: generating a first AC magnetic field having a first frequency, and a second AC magnetic field having a second frequency different from the first frequency; demodulating an output signal of the magnetic sensor element to produce two detection signals corresponding to the first and second AC magnetic fields; and processing the two detection signals to determine the number and location of magnetic particles that are present.

Applicants respectfully submit that Simmonds does not disclose any method that includes this combination of features.

Accordingly, for at least these reasons (and because of various other novel features recited in the claims), Applicants respectfully submit that claims 28-37 are all patentable over Simmonds.

CONCLUSION

In view of the foregoing explanations, Applicants respectfully request that the Examiner reconsider and reexamine the present application, allow claims 15-19 and 24-37 and pass the application to issue. In the event that there are any outstanding matters remaining in the present application, the Examiner is invited to contact Kenneth D. Springer (Reg. No. 39,843) at (571) 283.0720 to discuss these matters.

Respectfully submitted,

VOLENTINE & WHITT



By: _____

Kenneth D. Springer
Registration No. 39,843

VOLENTINE & WHITT
One Freedom Square
11951 Freedom Drive, Suite 1260
Reston, Virginia 20190
Telephone No.: (571) 283.0724
Facsimile No.: (571) 283.0740